SAND TANK WASH AT I-8
FCD GAGE ID# 6933

STATION DESCRIPTION

LOCATION – The gage site is at the I-8 crossing of Sand Tank Wash in the south part of Gila Bend. The gaging equipment is located on the northwest corner of the westbound I-8 bridge. Latitude N 32° 55' 58.7", Longitude W112° 42' 20.2". Located in S06 T6S R4W in the Gila Bend 7.5-minute quadrangle.

ESTABLISHMENT – The District established gaging on May 31, 2001.

DRAINAGE AREA – 185 mi^2. A split with Bender Wash and some losses or gains with Quilotosa Wash may cause this number to vary.

GAGE – The recording gage is a pressure transducer type instrument. The PT is located on the bridge west wingwall. The PT is at elevation 1.30 feet gage height.

There are no staff gages at this location.

There is one crest gage at this location. It is located next to the pressure transducer on the left bank bridge wall. It has pin elevation 1.55 feet gage height, levels of September 18, 2002.

ZERO GAGE HEIGHT – The zero gage height is arbitrarily defined as a point 1.00 feet below the pressure transducer diaphragm at the time of its initial installation. Zero gage height corresponds to 760.48 feet NAVD 1988.

HISTORY – No previous gaging or history at this location. An indirect measurement of the June 20, 2000 flood was done on June 28, 2000. Gage was installed on May 31, 2001. PT gage moved to elevation 0.75 feet gage height for construction on August 7, 2002. CSG removed. PT moved again following construction on September 18, 2002 to 1.30 feet gage height. Crest stage gage re-installed.

REFERENCE MARKS –

RM-SNDTNK is an FCD brass cap located about 100 feet northwest of the gage standpipe. Elevation 767.095 feet NAVD 1988, or 6.62 feet gage height, levels of June 7, 2001. Northing 704151.319 feet; Easting 457850.366 feet. Monument was established on May 1, 2001.

There are eight monumented cross sections in the gage reach.

Cross Section one is located at the gage and in on the north side of the westbound bridge. XS1LB is rebar with elevation 774.199 feet. XS1RB is rebar with elevation 775.017 feet.

Cross Section two is located about 200 feet downstream (north) of cross section one. XS2LB is a stake at elevation 764.316 feet. XS2RB is a stake at elevation 764.823 feet.

Cross Section three is located about 300 feet downstream from cross section two. XS3LB is a stake at elevation 764.231 feet. XS3RB is a stake at elevation 764.433 feet.

Cross Section Four is located about 225 fee downstream from cross section three. XS4LB is a stake at elevation 762.28 feet. XS4RB is a stake at elevation 762.771 feet.

Cross Section Five is located about 280 feet downstream from cross section four. XS5LB is a stake at elevation 759.964 feet. XS5RB is a stake at elevation 760.503 feet.

Cross Section Six is located about 200 feet downstream from cross section five. XS6LB is a stake at elevation 758.85 feet. XS6RB is a stake at elevation 759.548 feet.

Cross Section Seven is located about 300 feet downstream from cross section six. XS7LB is a stake at elevation 757.639 feet. XS7RB is a stake at elevation 758.572 feet.

Cross Section Eight is located about 325 feet downstream from cross section seven. XS8LB is a stake with elevation 755.65 feet. XS8RB is a stake at elevation 756.573 feet.

CHANNEL AND CONTROL – The channel is predominantly a sand channel up and downstream of the gage location. The channel is relatively flat with shallow banks on both sides. The main channel is defined and both banks are moderately to heavily vegetated. The channel flows to the north and curves slightly to the northwest past the bridge. The I-8 bridge utilized several small pillars for support.

Control for the channel is riffle control at low flows. The channel is control above about a foot depth. Above about four feet depth, the channel begins to spill out of the main channel.

RATING – The current rating is Rating #1, developed from an HEC-RAS model using surveyed data from the June 7, 2001 survey.

DISCHARGE MEASUREMENTS – Wading measurements can be made in the channel downstream of the gage. The I-8 bridge is not suitable for bridge measurements. Indirect measurements are possible in a reach of channel downstream from the bridge. For low flows confined to the gaged main channel, cross sections 2, 3, and 4 downstream should be used. If flows were great enough that the channel about 400

feet west of the gaged channel also flowed, Cross sections 6, 7, and 8 should be surveyed too.

POINT OF ZERO FLOW – Is at about 0.0 feet gage height, levels of September 18, 2002.

FLOODS – A flood of 520 cfs and 3.1 feet gage height occurred June 20, 2000. It occurred prior to gage installation.

REGULATION – None known

DIVERSIONS – There may be some natural diversions to other watersheds in the flatlands north of the Sand Tank Mountains.

ACCURACY – Fair

JUSTIFICATION – Monitor flows in Sand Tank Wash for local street flooding in Gila Bend.

UPDATE – July 20, 2011
D E Gardner